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## Edinburgh Research Explorer

### **And conservation for all: Structure and Conservation of Neoclassical Stonework in Edinburgh**

**Citation for published version:**

Theodossopoulos, D 2011, 'And conservation for all: Structure and Conservation of Neoclassical Stonework in Edinburgh'. in Cast Collection Conference 2011. ECA, Edinburgh .

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Author final version (often known as postprint)

**Published In:**

Cast Collection Conference 2011

**Publisher Rights Statement:**

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And conservation for all: structure and conservation of  
neoclassical stonework in Edinburgh  
Casts Conference Edinburgh 10 September 2011



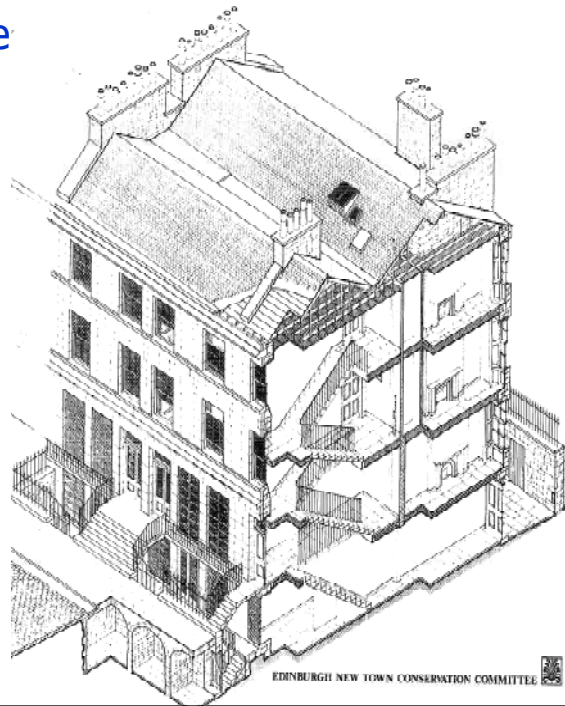
And conservation for all: structure and conservation  
of neoclassical stonework in Edinburgh

## Key issues

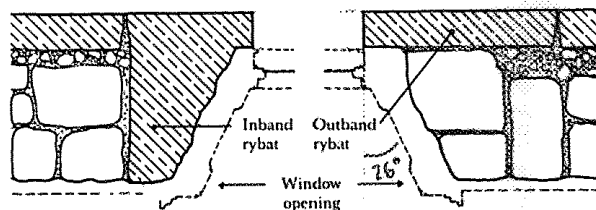
- Recovery of the structural scheme and construction values
- Materiality of elevations: insertion of new stones correctly selected to match the existing ones is visually unsatisfactory
- Technical issues as cultural achievements of the period
- Practice
- Research and sharing the knowledge
- Explore physical models to simulate good construction and conservation practice of crucial elements

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## Structural scheme



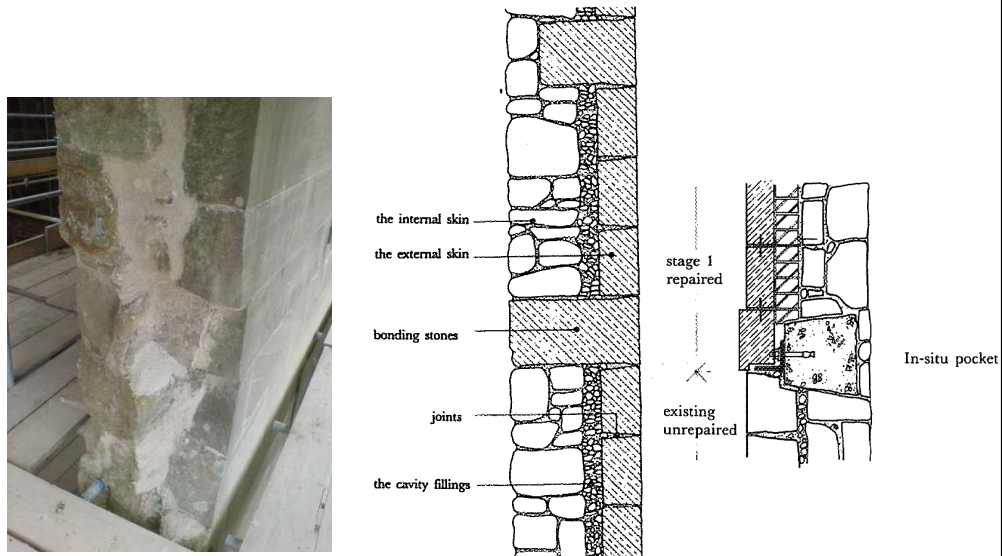
## Technological values: window surrounds



PLAN OF TYPICAL WINDOW OPENING

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## Technological values: wall and facings



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## “Regola dell’arte”: problems and limitations

- Long-term: integrity of pins, stability of windows, tying of floor to wall, tying of crossing walls
- Structural problems: subsidence
- Additions and alterations
- Compliance to modern regulations? Fire safety, energy efficiency
- Public safety



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## Materiality of elevation: unsatisfactory composition



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## Conservation issues

- Sandstone is porous, not limestone ...
- Craigleith is durable and “blends”
- Authenticity in stone replacement
- Stonework is a system and performs a function
- No strictly archaeological/ documentary values
- Stone cleaning: chemicals can be a solution - past traumatic experiences



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## Integration (limestone, marble)



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## Integration of lacunae/ cleaning (Neuesmuseum)



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Palazzo Spada, Rome

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## Theory, information, dissemination

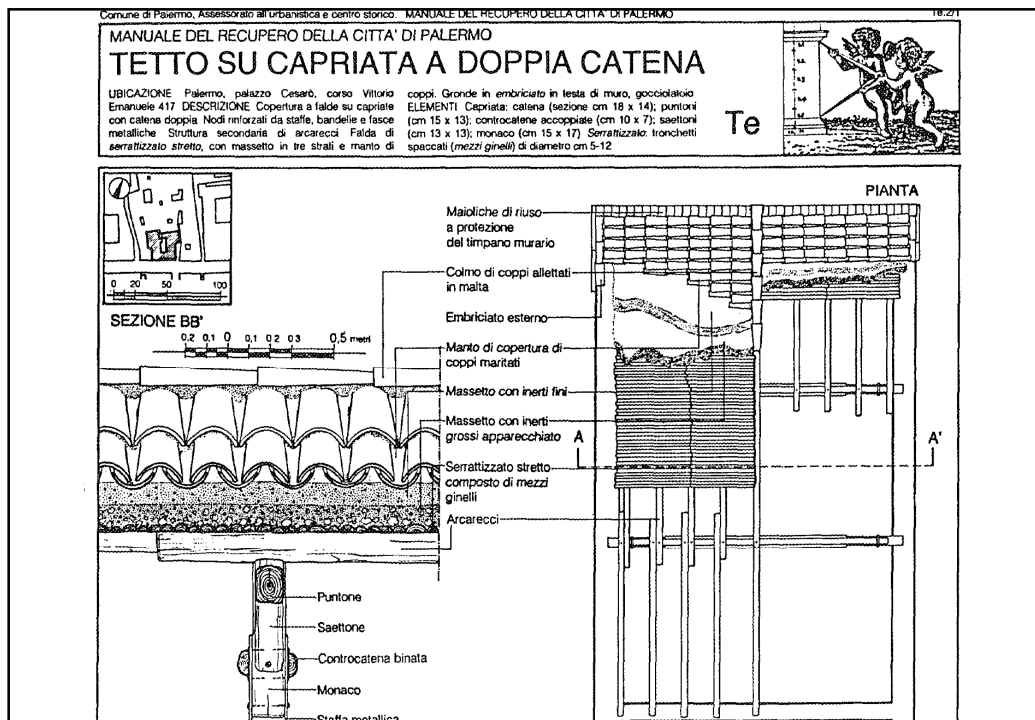
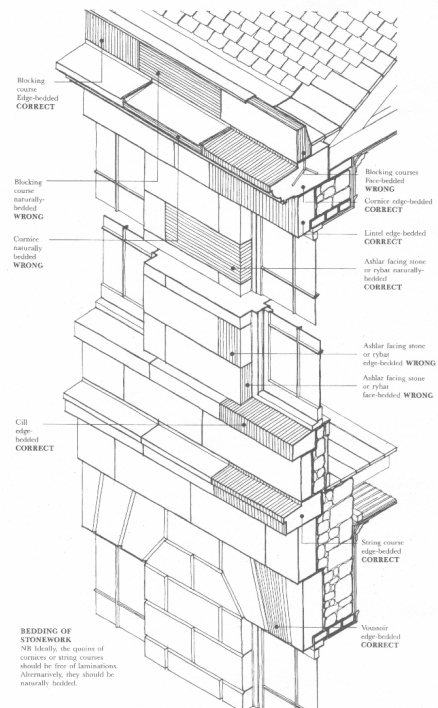
- Concept of “Built environment” and urban framework
- Authenticity is misunderstood as fabric is linked to a function and performance rather having only documentary values
- Objections to consolidating techniques or stone-cleaning very often stem from narrow ideological criteria.
- Conservation is often mistaken as a simplistic replacement and the preservation of neoclassical stonework is very indicative
- In any method the intentions are good and the results can be a testimony of our technical abilities
- They may undermine the purity of neoclassical lines and their scenic effect on their immediate environment, the essential values of this architecture that the interventions must actualise

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## Management

- Unique powers of Edinburgh City Council
- “Typological process” and manuals  
(Manuale del recupero, Citta di Roma):
  - Explain materials and systems to be respected
  - Recommend conservation materials
  - Suggest criteria through examples
  - Create an environment for good practice and pass message to building owners
- The need for a theory for Edinburgh?
- Update “Care and Conservation of Georgian Houses” - 1984





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## Research: models

- Improve understanding of performance of key structural elements in the conservation of neoclassic stonework
- Disseminate good practice among practitioners, owners, trainers

What we can learn

- Teaching tool
- Difference in texture
- Simulate process of assembly
- Masonry bond
- Structural performance



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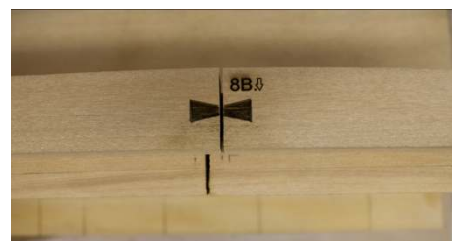


Site Visit

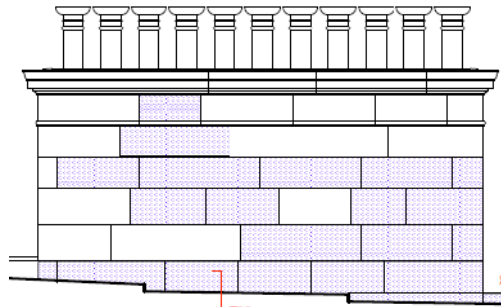
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## Leith Citadel

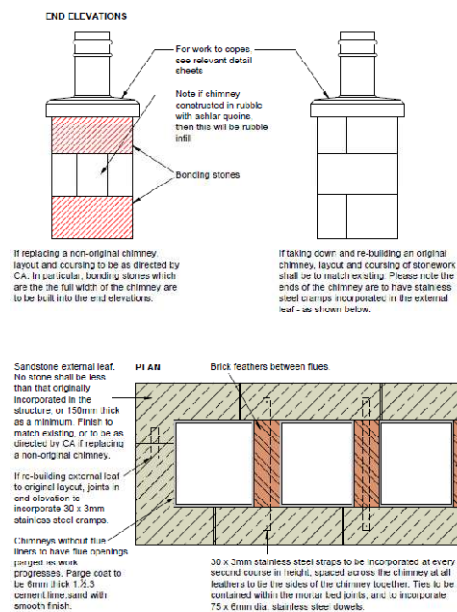


## Stone chimneys



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## Research & analysis



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## Stone chimneys



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## Typical window surround



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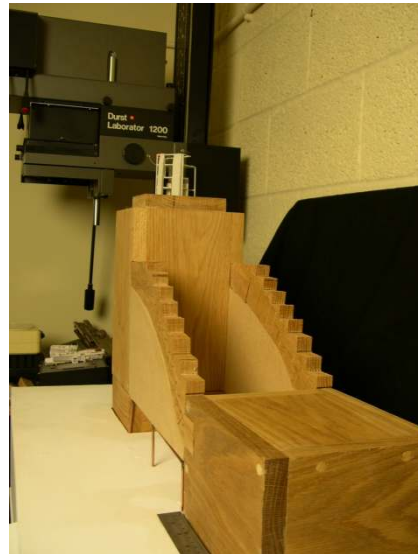


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## Stone window surround model

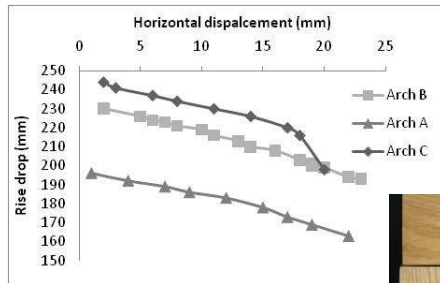


## Basement staircase



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## Tests

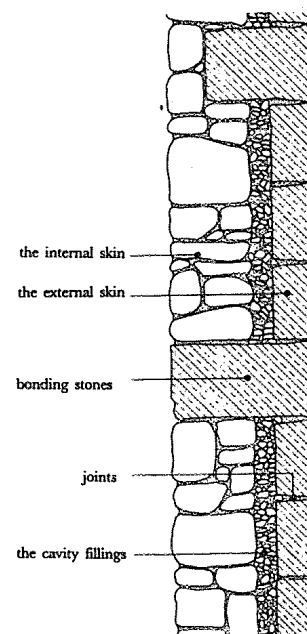


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## What we can't learn

(where we need research to be shared)

- Effect of gravity ....
- Long-setting times of limes
- Bottom-up process
- Bond with rubble back
- Durability
- Ageing of materials



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## Some texts

- Giovanetti, F. (1998). Typological process towards urban rehabilitation. The Manuale del Recupero of Rome. In Typological Process and Design Theory. Attilio Petruccioli (ed). Cambridge, Massachusetts
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<http://homepages.ed.ac.uk/dtheodo1/neoclassic.html>

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